

Claims:

Claim 1, rewrite as Claim 1 (currently amended) as follows:

1. (currently amended) A method enabling the precise creation, fitting, and reproduction of objects comprising the steps of;
 - 1) defining a single 2-dimensional profile representation of an object;
 - 2) determining by measurement and defining a finite number of parametric values, comprising [such as] angular and/or linear dimensions and/or point coordinates, sufficient to characterize how the object changes in cross-section in 3-dimensional space with respect to the 2-dimensional profile of step 1;
 - 3) converting the profile and parametric values into an electronic format suitable for input to computer aided design and manufacturing (CAD/CAM) programs;
 - 4) creating a virtual CAD model from the profile and parametric values;
 - 5) calculating Numerical Control (NC) motion commands from the CAD model using CAM technology;
 - 6) processing an object using Computer Numerical Controlled (CNC) machine;and,
 - 7) transmitting data throughout the process, enabling theses steps to be conducted at any combination of geographic locations.

Claim 2, (previously presented):

2. The method of claim 1, wherein step 1 comprises a tracing technique to define the 2-dimensional profile.

Claim 3, (previously presented):

3. The method of claim 1, wherein step 1 comprises a digitizing device to define the 2-dimensional profile.

Claim 4, (previously presented):

4. The method of claim 1, wherein step 1 comprises an optical scanning process to define

the 2-dimensional profile.

Claim 5, (previously presented):

5. The method of claim 1, wherein step 1 comprises exposure to a reactive chemical media, to define the 2-dimensional profile.

Claim 6, rewrite as Claim 6 (currently amended) as follows:

6. The method of claim 1, wherein step 1 and step 2 comprise a digitizing device to define the 2-dimensional profile and 3-dimensional parametric values.

Claim 7, (previously presented):

7. The method of claim 1, wherein step 2 is facilitated by means of printed measuring utensils.

Claim 8, (previously presented):

8. The method of claim 1, wherein step 1 and step 2 are facilitated by means of integrated instruction and data acquisition form.

Claim 9, (previously presented):

9. The method of claim 1, wherein step 3 comprises optical scanning technology.

Claim 10, (previously presented):

10. The method of claim 1 [14] wherein step 6 comprises a CNC controlled machine with a rotating tool.

Claim 11, (previously presented):

11. The method of claim 1 wherein step 6 comprises a CNC controlled machine with a cutting jet.

Claim 12, (previously presented):

12. The method of claim 1 wherein step 6 comprises a CNC controlled machine with a

cutting wire.

Claim 13, (previously presented):

13. The method of claim 1 wherein step 6 comprises a CNC controlled machine with a cutting laser.

Claim 14, (previously presented):

14. The method of claim 1 wherein step 6 comprises a CNC controlled Rapid Prototyping machine capable of directly producing a part.

Claim 15, (previously presented):

15. The method of claim 1, wherein step 7 comprises data transmitted electronically.

Claim 16, (previously presented):

16. The method of claim 1, wherein step 7 comprises data transmitted over the Internet.

Claim 17, (previously presented):

17. The method of claim 1 wherein any combination of steps 1-7 may be combined consolidated and/or automated.

Claim 18, rewrite as Claim 18 (currently amended) as follows:

18. (currently amended) An apparatus enabling the precise creation, fitting, and reproduction of objects comprising;

- 1) a means of defining a 2-dimensional profile representation of an object's edges;
- 2) a means of determining by measurement and defining a finite number of parametric values [parameter values], comprising [such as] angular and/or linear dimensions and/or point coordinates, sufficient to characterize how the object changes in cross-section in 3-dimensional space with respect to the 2-dimensional profile of step 1;

- 3) a means of converting the profile and parametric values into an electronic format suitable for input to computer aided design and manufacturing (CAD/CAM) programs;
 - 4) a means of creating a virtual CAD model from the profile and parametric values;
 - 5) a means of calculating Numerical Control (NC) motion commands from the CAD model using CAM technology;
 - 6) a means of processing an object using Computer Numerical Controlled (CNC) manufacturing technology;
- and,
- 7) a means of transmitting data throughout the process enabling these steps to be conducted at any combination of geographic locations.